mecc

mecc keyboarding primer

from the series
keyboarding

instructional computing courseware
for the **apple®** II computer

**the computing and
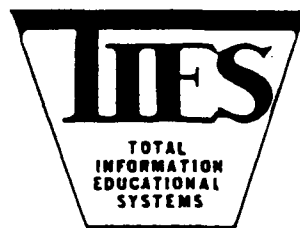information collection**
Basic skills for the information age.

mecc keyboarding primer

**from the series
keyboarding**

instructional computing courseware
for the **apple**® II computer

Developed by

TIES

**TOTAL
INFORMATION
EDUCATIONAL
SYSTEMS**

This manual is compatible

with

the MECC Keyboarding Primer diskette

Version 1.x

TABLE OF CONTENTS

MECC's Computing and Information Collection

MECC Courseware Development
under the
Minnesota High Technology and Educational Improvement Act

MECC Keyboarding Primer is part of MECC's **Computing and Information** software collection. This collection comprises a wide range of software designed to teach students strategies for using electronic technology to process information. The **Computing and Information** project was funded in part by the Minnesota High Technology and Educational Improvement Act of 1983.

Two basic assumptions are behind the development of these products:

> We are moving toward a world in which the ability to work with information is becoming critical. Students will need to know how to use electronic tools to access and display information, to organize and manipulate information, and to evaluate information. This knowledge will enable them to solve problems and to create, develop, and communicate their own ideas.

> Information technology is changing the nature of what needs to be learned and how instruction will be provided. As technology evolves, we need to continually evaluate and develop more efficient methods of working with information.

The **Computing and Information** collection is intended for students in grades 4-12. Although the collection is not specifically designed to be used in a particular sequence, many skills presented in packages for middle school students are further developed in packages intended for older students. MECC Keyboarding Primer is part of the Keyboarding Series. The four other series in the **Computing and Information** collection are Composing Information, Displaying Information, Accessing Information, and Evaluating Information. MECC will be adding packages to the collection in the future. For more information contact the MECC Software Division.

Also available is the MECC Computing and Information Teacher's Guide, which shows how the packages in the collection can be used as a course in computer literacy or information processing. The Guide identifies goals and objectives and gives specific plans for using the products in several different types of instructional sequences. A special feature of the Guide is a set of Student Activity Cards, which provide student-centered classroom activities for each package in the **Computing and Information** collection.

The matrix on the next page outlines the **Computing and Information** collection by product title, description, and grade range.

i

MECC's Computing and Information Collection

Series	PRODUCT	NO.	4	5	6	7	8	9	10	11	12
COURSE GUIDE	**MECC Computing and Information Teacher's Guide** — integrates the collection into courses on information processing or computer literacy	A-142									
KEYBOARDING SERIES	**MECC Keyboarding Primer** — teaches typing techniques	A-130	√	√	√	√	√	√			
KEYBOARDING SERIES	**MECC Keyboarding Master** — builds typing speed and accuracy	A-131		√	√	√	√	√			
COMPOSING INFORMATION SERIES	**MECC Writer** — presents a basic word processing system	A-132			√	√	√	√	√	√	√
COMPOSING INFORMATION SERIES	**MECC Speller** — identifies misspelled and confusing words	A-134			√	√	√	√	√		
COMPOSING INFORMATION SERIES	**MECC Editor** — reviews and edits student writing	A-135				√	√	√	√	√	√
COMPOSING INFORMATION SERIES	**MECC Write Start** — encourages creativity with word processing	A-133			√	√	√	√	√		
DISPLAYING INFORMATION SERIES	**MECC Graphing Primer** — reviews graph construction and analysis	A-136				√	√	√			
DISPLAYING INFORMATION SERIES	**MECC Graph** — produces graphs with student-supplied data	A-137				√	√	√	√	√	√
ACCESSING INFORMATION SERIES	**MECC Stuff and Fetch** — teaches practical database organization	A-138			√	√	√	√	√		
ACCESSING INFORMATION SERIES	**MECC Trivia Machine** — develops key word searching strategies	A-139				√	√	√			
ACCESSING INFORMATION SERIES	**MECC Dataquest: The Presidents** — retrieves information on U.S. Presidents	A-140				√	√	√	√	√	√
EVALUATING INFORMATION SERIES	**MECC Information Manager** — promotes use of productivity tools to solve problems	A-141				√	√	√	√	√	√

INTRODUCTION

MECC Keyboarding Primer is the first package in MECC's two-part Keyboarding Series. It contains an on-line introduction and eighteen lessons designed to teach students the location and correct stroking on the electronic keyboard of alphabetic, numeric, special function, and programming keys.

Goals of Keyboarding Primer

The goals for using Keyboarding Primer are:

1. At the end of each lesson, students should be able to type a thirty-space line that contains the characters introduced in the lesson with no more than three uncorrected errors.

2. Students should maintain or increase their gross speed (gwpm—gross words per minute) while learning new keys on the keyboard.

No specific figure for gross words per minute is defined for this package because of the diverse abilities of the students who will use the product. It is recommended that you decide on a speed that is best for your class.

Materials in Keyboarding Primer

The Keyboarding Primer package includes:

- A Teacher Utilities diskette that may be used to track the progress of up to three classes of 1 to 48 students each;

- One or more Student Program diskettes that contain the keyboarding lessons;

  Note: It is possible to use Keyboarding Primer with just one Student Program diskette. However, if you have more than one computer, you may want multiple copies of the diskette. There are two ways to obtain extra copies of the Student Program diskette:

  1. If you are a MECC Institutional Member, you can obtain copies through your membership. Contact the person who provides you with MECC diskettes to request additional copies of the Student Program diskette.

  2. If you are not a MECC Institutional Member, you can purchase a "Lab Kit" of additional Student Program diskettes from your MECC dealer. "Lab Kits" are priced to offer you a significant savings on multiple copies of the Student Program diskettes.

  You may use up to 48 Student Program diskettes with one Teacher Utilities diskette, so it is not necessary in most cases to have more than one Teacher Utilities diskette.

1

INTRODUCTION (continued)

- <u>Keyboarding Primer</u> support manual.

Equipment for **Keyboarding Primer**

To use <u>Keyboarding Primer</u>, you need the following equipment:

- an Apple //e or //c computer;

- one disk drive;

- a monitor or television;

- a printer.

A printer is required for the teacher to prepare a class profile. All other student record information can be displayed on a monitor or it can be printed. To use a printer, your printer interface card must be in Slot 1 of your computer. A list of printers that are compatible with this product are listed in Appendix B, "Printer Compatibility."

This product can be used with a Corvus hard disk system. For directions, see Appendix C of this manual.

Special Information about Using **Keyboarding Primer**

The Caps Lock Key on your Apple computer must be **up** when using this package.

Words in the software that are enclosed in brackets, such as [Return], indicate that you should press that key.

Blanks within brackets, [____], indicate that the program is waiting for you to enter information.

At most points in the lessons, when students are asked to press the Space Bar to continue, they can press the Escape Key once to get out of the lesson. The program returns them to the Lesson menu. If students are using the product in managed mode and they escape before doing the speed check, they will be required to complete the entire lesson again to get credit for it. The Student Program diskette will not keep track of incomplete lessons.

To correct mistakes, press the Left-Arrow Key and the last character entered will be erased. The Delete Key **does not** work.

BACKGROUND INFORMATION

What Is Keyboarding?

Keyboarding is using a typewriter or microcomputer keyboard to enter information. Typically, the expectation is that people doing the keyboarding will: 1) use the correct fingering and 2) type without frequently looking at the keyboard (touch type). Keyboarding does not usually refer to the manipulation of information; however, keyboarding skill is of little value unless there are useful applications.

Why Have Keyboarding for Elementary and Junior High Children?

With advancing technology, there are more and more reasons why children of elementary and junior high school age should learn to use the keyboard efficiently.

First, children will be able to accomplish more because efficient use of the keyboard is considerably faster than printing or writing. Most children in elementary school today will be using the keyboard extensively to interact with educational software, to produce compositions and reports, and to create computer programs. Students who can use the keyboard efficiently will have additional time for enrichment or remedial activities.

Second, children are likely to produce more accurate copy. As part of their keyboarding experience, they learn to proofread their writing and to print neat samples. The teacher can then read the student's work more quickly. This leaves time and energy for providing feedback on the more important aspects of writing, such as content and language skill. Yet another factor contributing to accurate copy is the ease of correction that is possible with a keyboard. Students are more likely to make corrections when a word processing program makes it possible to edit compositions without rewriting an entire paper.

Third, it is important that children learn keyboarding correctly the first time. With increasing exposure to computers in homes and schools, children are interacting with keyboards at a young age. By learning appropriate keyboarding skills in elementary and junior high school, children can avoid bad keyboarding habits that are difficult to break.

Fourth, the positive attitudinal effects of good keyboarding can carry over into other curriculum areas. When students enjoy the keyboard, that enjoyment is reflected in other work they do while at the computer. Experience has shown that when the physical process of writing is made easier and faster with keyboarding, children write more.

How Does a Person Learn Keyboarding?

Several principles apply to learning keyboarding, all of which have been incorporated into the development of this software. Many practices that have been used in the past to teach typing have since been found unnecessary—and in many cases detrimental—to keyboard learning.

The principal sense that is used in learning keyboarding is kinesthesis, a muscular sensation that provides information on the appropriate response to be made. Kinesthetic responses in keyboarding are developed by making numerous responses to a given stimulus. In other words, students learn to strike an "r" when desired by striking that key many times.

Keyboarding, however, is not simply learning the 26 alphabetic keys, 10 number keys, and various symbol keys. Efficiency in keyboarding is developed by "chaining"—that is, entering combinations of keys as single units. It is necessary to learn to key "er," "fr," "tr," and so forth, in learning the "r" key. Such chains are not formed cognitively. Rather, they are developed by repetitious typing of letters forming chains as close together as possible. Thus, while teachers for many years have used music and other devices to develop "rhythm," the outcome, instead, has been to inhibit the development of chains. Metronomic rhythms (stroking keys with equal intervals between) is harmful in developing keyboarding skill and should not be used.

While many people learned to type under conditions that required them not to watch their fingers or the keyboard, research has provided evidence that watching the fingers, keys, or product produces skill more quickly. Therefore, students should receive as much feedback as possible from these sources in the early stages of learning. Encouragement (not prescription) to keep eyes on the copy and away from the keyboard should be given as students acquire competence. Also, wall charts are not useful learning tools.

Another area in which learning has typically been hindered is the premature emphasis that is placed on accuracy. While the end goal of keyboarding is learning how to key accurately, it is important that early emphasis be on speed, with later emphasis placed on accuracy. For this reason, in the tutorial package, Keyboarding Primer, the presentation lessons on the keyboard emphasize speed. Error limits have been provided to keep students from striking keys indiscriminately, but the limits are very generous.

A frustration facing students and teachers alike is the lack of proven drill material for improving students' accuracy. At the present time, the only known ways to improve accuracy are practice and keying at a speed that is slightly lower than the students' maximum speed. The other package in the MECC Keyboarding Series, Keyboarding Master, contains drills that pace students to keep them slightly below their maximum speed, thus encouraging the development of accuracy.

Knowledge of results is an especially important tool in the development of good keyboarding skills. Thus, with each practice exercise, the students are given information about speed performance. Students are also given feedback on accuracy when they later use the Keyboarding Master package. In addition, the management portion of this package provides both students and teachers with a graphic display of performance to permit the early identification of plateaus and to encourage students, particularly in the early stages, with visual evidence of the rapid improvement they will likely experience.

What Determines the Order in which Keys Are Presented?

Many factors are involved in deciding the order in which to present the keyboard. Such considerations include:

- **EASE OF MAKING THE KEYSTROKE.** Home row keys are the easiest, followed by "up" reaches and "down" reaches, with the top row (numbers and symbols) the most difficult. In addition, index finger keys are the easiest, with the ring and little fingers being the most difficult.

- **FREQUENCY OF USE OF KEYS.** One of the objectives in developing the drill material was to permit the use of high-frequency words appropriate to an elementary-level vocabulary as soon as possible. To do that, it was necessary first to present the keys that are used most often. Since the keyboard was not designed systematically for today's usage, the order chosen for presentation may not appear to be systematic.

- **NEED TO PRESENT POTENTIALLY COMPETING RESPONSES CLOSE TOGETHER, THOUGH NOT NECESSARILY WITH THE SAME LESSON.** A frequent cause of stroking error is the "substitution" error, where one key that requires almost the same response as another substitutes for it; for example, "e" and "i" require the same reach using the same finger, but on opposite hands. By presenting the keys that are close together, students have considerable opportunity to learn to distinguish the responses between the two keys.

- **NEED TO PRESENT MOST COMMONLY USED FUNCTION KEYS EARLY.** For example, Return, Space Bar, Shift, and arrow keys are presented early, so that sentences can be entered and the instructional components of the software can be accessed and used efficiently.

DESCRIPTION

Keyboarding Primer is a series of lessons designed to introduce students to touch typing on an electronic keyboard. It includes an introduction that covers posture and positioning at the keyboard and also includes eighteen lessons designed to teach students the correct location and stroking for alphabetic, numeric, special function, and programming keys.

Curriculum Area:	General Purpose
Subject:	Keyboarding
Topic:	Touch Typing
Type:	Tutorial
Reading Level:	3
Grade Range:	4-9
Classroom Use:	Individual

LEARNING OBJECTIVES

After using this courseware, the student should be able to:

- type a thirty-space line containing no more than three uncorrected errors;

- maintain or increase gross speed (gwpm—gross words per minute) while learning new keys on the keyboard.

PROGRAM PREVIEW

Preparing Student Program Diskettes

The lessons in Keyboarding Primer can be used in managed or unmanaged mode. In managed mode, the computer monitors the progress of the students, whereas in unmanaged mode the teacher must get progress information directly from the students.

To prepare your diskettes for student use, follow these steps:

1. Decide on the format in which you will use the Keyboarding Primer diskettes. The following are possible arrangements for using the diskettes:

   ● one or more **unmanaged** Student Program diskettes;

   ● one **managed** Student Program diskette;

   ● multiple (2 to 48) **managed** Student Program diskettes;

   ● an **unmanaged** network version of the Student Program diskette;

   ● a **managed** network version of the Student Program diskette.

   If you plan to use the lessons in **unmanaged mode**, you don't have to make any modifications to the package. You can use the Student Program diskette(s) or network version as is and ignore the Teacher Utilities diskette. It is not necessary for you to read further in this section.

   If you plan to use the lessons in **managed** mode, you must prepare your Student Program diskette(s) before students begin using the lessons. To implement **managed** mode, continue on through the remaining steps.

2. Gather the necessary materials. You will need:

   a. Keyboarding Primer Teacher Utilities diskette;

      The Teacher Utilities diskette can monitor:

      ● a maximum of 3 classes;

      ● a maximum of 48 students per class (a total of 144 students);

      ● one set of 1 to 48 Student Program diskettes.

      The maximum number of student records you can monitor remains the same—up to 144 records—but the student records can be on 1 to 48 different Student Program diskettes in the set.

b.   Keyboarding Primer Student Program diskette(s);

A Student Program diskette can store records for:

- a maximum of 3 classes;

- a maximum of 48 students per class (a total of 144 student records can be on one Student Program diskette if it is the only diskette in the set).

If you are the first teacher to use this package, you next must decide how many Student Program diskettes to include in the set. If you are the second or third teacher to use this package, gather all Student Program diskettes modified by the first teacher and go to Step 4.

Your Teacher Utilities diskette can monitor only one set of Student Program diskettes. The set can include 1 to 48 diskettes. The three classes or teachers who share the Teacher Utilities diskette must share the Student Program diskettes in the set. For example, if the first teacher creates the set with 10 Student Program diskettes, the other classes can use only those 10 Student Program diskettes.

Note: It is important that the first teacher prepare enough Student Program diskettes to meet the needs of all three classes. After you have completed the following steps to modify your set of Student Program diskettes to managed mode, it is impossible to add new diskettes to the set without first erasing the student records from all diskettes. (See "Deleting Student Records," starting on page 23.)

If you plan to use more than one Student Program diskette, follow these steps to decide how many Student Program diskettes to include in your set:

i.   Find out how many Student Program diskettes each of the three classes will need.

ii.   Determine the maximum number of Student Program diskettes any of the three classes will need.

For example, the needs of three classes might be as follows: Class 1 needs 18 diskettes, Class 2 needs 13 diskettes, and Class 3 needs 19 diskettes. The maximum number is 19, so you need 19 Student Program diskettes.

It is a good idea to add extra Student Program diskettes to your total for use as backups. For example, instead of 19, the final number you need might be 20 to 22 Student Program diskettes.

PROGRAM PREVIEW (continued)

iii. Obtain the copies of the Student Program diskette(s).

If you don't have the number of Student Program diskettes you need, there are two ways to obtain extra copies:

- If you are a MECC Institutional Member, you can obtain copies through your membership. Contact the person who provides you with MECC diskettes to request additional copies of the Student Program diskette.

- If you are not a MECC Institutional Member, you can purchase a "Lab Kit" of additional Student Program diskettes from your MECC dealer. "Lab Kits" are priced to offer you a significant savings on multiple copies of the Student Program diskettes.

c. An Apple //e or Apple //c computer.

3. If you are the first teacher to use the diskettes in managed mode, you should label your Student Program diskette(s) with the letter "A" and number them consecutively from one through the number of diskettes you have (for example, A-1, A-2, A-3 . . .). If you are using just one Student Program diskette, label it A-1.

Please note that Keyboarding Primer diskettes are the first diskettes in the MECC Keyboarding Series. Keyboarding Primer Teacher Utilities and Student Program diskettes, being the first diskettes in the series, are labeled with the letter "A" and referred to as "Disk Set A."

4. Put the Teacher Utilities diskette into Drive 1 and turn on your computer. You will see the main menu (Figure 1).

5. Select Option 1, "Manage Student Records."

6. Enter your name when the program asks for it (Figure 2).

```
 _____
|    Keyboarding Primer          |
|    Teacher Utilities           |
|_____|
|                                |
| 1. Manage Student Records      |
|                                |
| 2. Cleanup                     |
|                                |
| 3. Descriptions                |
|                                |
| 4. End                         |
|                                |
|                                |
|                                |
| Which program do you want to use? [█] |
|_____|
```

```
 _____
|    Keyboarding Primer          |
|    Management - Disk A          |
|_____|
|                                |
|                                |
| Please enter your last name    |
| and press [RETURN].            |
|                                |
| Then enter the initial for     |
| your first name and press [RETURN] |
|                                |
| Last name [SMITH_____]      |
| Initial   [S█]                 |
|                                |
|                                |
| Press [ESC] to enter again     |
|_____|
```
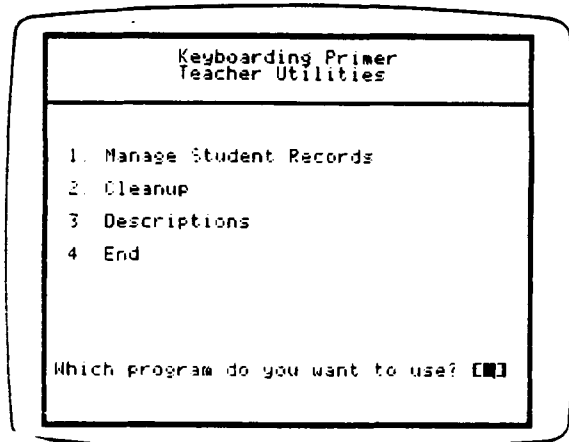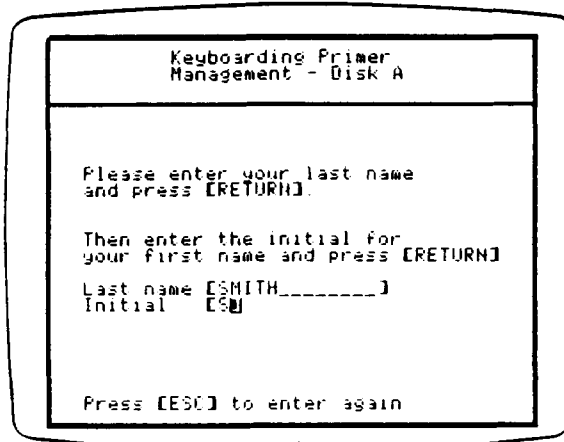
Figure 1

Figure 2

PROGRAM PREVIEW (continued)

7. If you are the first teacher to use the diskettes in managed mode, you will be asked how many diskettes you want in the set (Figure 3). Enter the number of diskettes you prepared in Steps 2 and 3. (If you are the second or third teacher, the program skips this option, because you can use **only** the diskettes prepared by the first teacher. The program remembers how many diskettes were prepared by the first teacher.)

8. If you are the first teacher to use the diskettes in managed mode, the program will instruct you to number and insert the Student Program diskettes one at a time (Figure 4). It is not necessary to label the diskette if you did it in Step 3.

```
        Keyboarding Primer
        Management - Disk A

How many disks do you want
in disk set A?  [ ]




Press [ESC] to return to options
```

Figure 3

```
        Keyboarding Primer
        Management - Disk A

Remove the disk from the
disk drive.

Label one of the disks in set A: A-1

Insert that disk
into the disk drive.



Press [S] to skip this disk
Press the [SPACE BAR] to continue
```
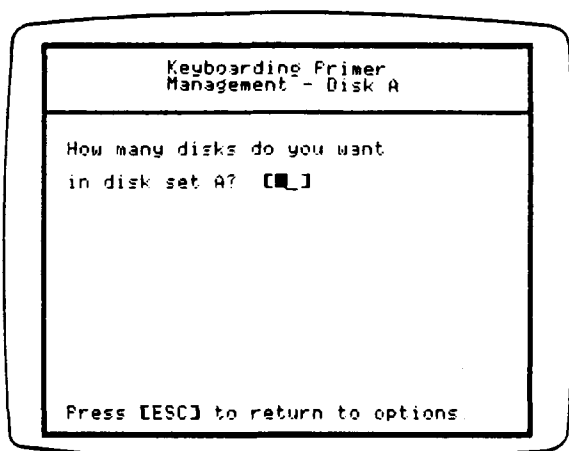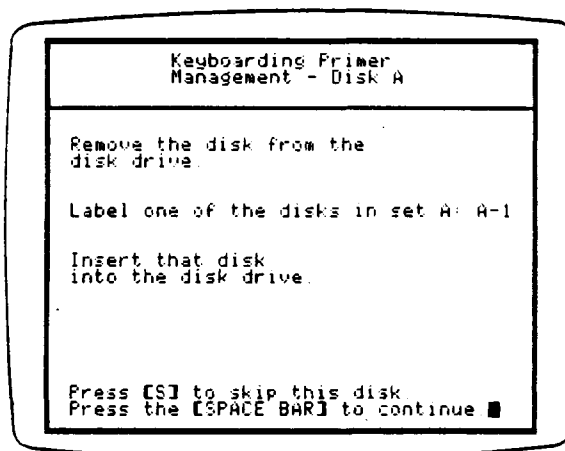
Figure 4

If you are the second or third teacher to use the Teacher Utilities diskette, the program will prompt you to put in the diskettes prepared by the first teacher (A-1, A-2, A-3 . . .) one at a time. (**Note:** If one of the diskettes is missing or damaged, press **S** to skip that diskette when the program asks for it. If you find the missing diskette at a later time, **do not use it** for your class. It will not be formatted for your class and any work your students do on that diskette will not be recorded.)

The Student Program diskettes are now ready to use in managed mode.

9. After the last Student Program diskette has been modified, the program will instruct you to reinsert your Teacher Utilities diskette and press the Space Bar. The main menu will then appear.
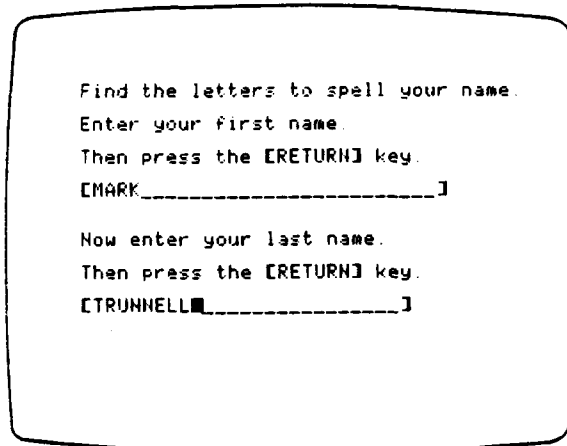
PROGRAM PREVIEW (continued)

Using Student Program Diskettes
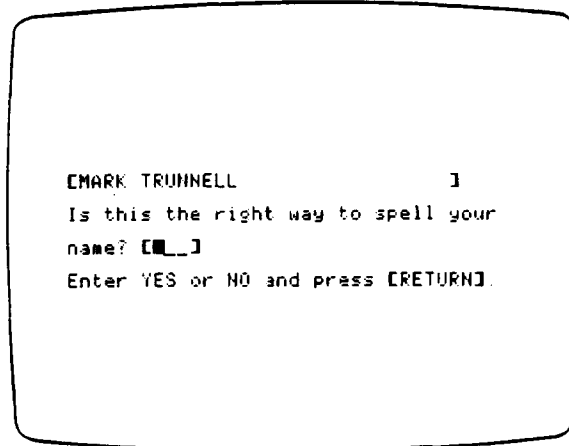
For students to use a Student Program diskette, they should follow these steps:

1. Students put the Student Program diskette into Drive 1 and turn on the computer.

2. After showing the introductory screens, the program prompts students to enter their names (Figure 1). Students enter their names and press the Return Key.

3. The program asks students to verify that they entered their names correctly (Figure 2). Students enter **Y** to continue if the name is entered correctly. If the diskette is set to managed mode, this is only necessary the first time students enter their names.

```
Find the letters to spell your name.
Enter your first name.
Then press the [RETURN] key.
[MARK_____]

Now enter your last name.
Then press the [RETURN] key.
[TRUNNELL█_____]
```

Figure 1

```
[MARK TRUNNELL              ]
Is this the right way to spell your
name? [█__]
Enter YES or NO and press [RETURN].
```

Figure 2

PROGRAM PREVIEW (continued)

4.   If the Student Program diskette is set up to be managed, the first time students use the program, they are asked to identify which class they are in (Figure 3). After identifying their teacher, students are taken directly to the introductory lesson (Step 7).   All future records for the students are recorded under the teacher they choose.

If students choose "Teacher Not Listed," no records are saved, and the program operates in unmanaged mode.

5.   For students working in unmanaged mode, the program next asks whether they have used this diskette before (Figure 4).
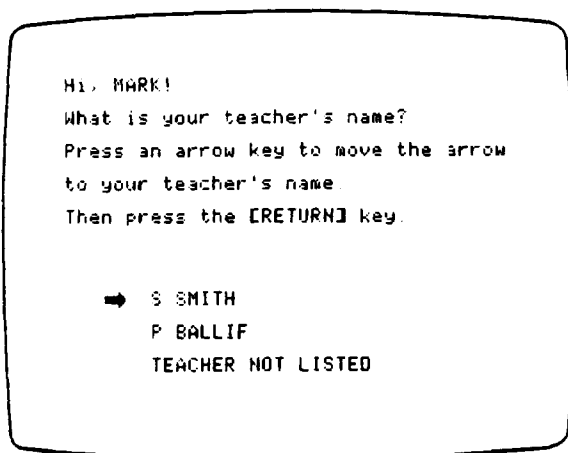
Figure 3
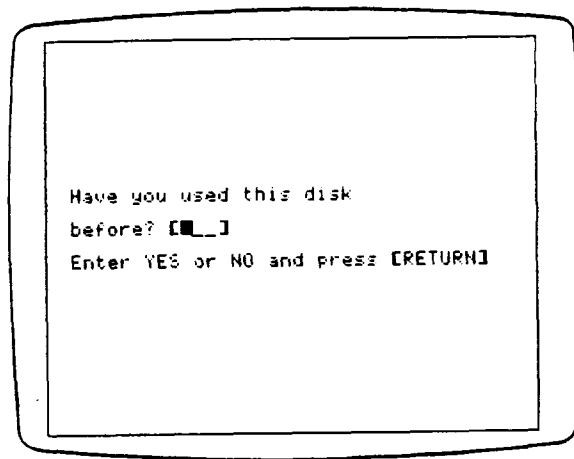
Figure 4

PROGRAM PREVIEW (continued)

6.   Students who have used the Student Program diskette before, managed or unmanaged, are asked if they want to repeat the introductory lesson (Figure 5).

Students who answer **Y** go to the introductory lesson (Step 7).   Students who answer **N** see the Lessons menu on the diskette (Step 8).

7.   Students see the following topics in the introductory lesson:

●   pressing the Space Bar;

●   body position and posture;

●   home row finger placement;

●   function of the cursor.

When students have completed the introductory lesson, they see the Lesson menu (Step 8).


```
Do you wish to use the INTRODUCTION
to the lessons? [█__]
Enter YES or NO and press [RETURN]
```
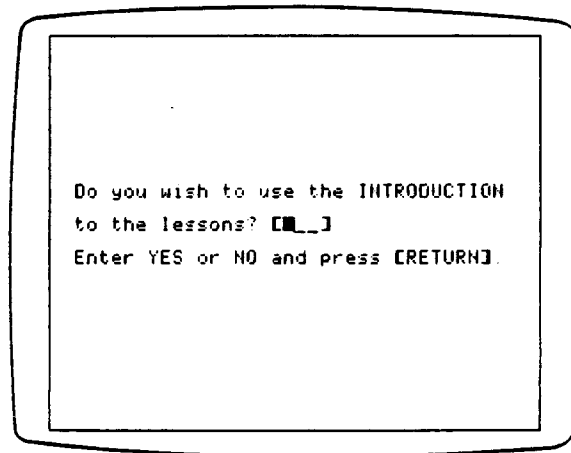
Figure 5

PROGRAM PREVIEW (continued)

8.   The Lesson menu shows the eighteen lessons available on the Student Program diskette (Figure 6). If the diskette is managed, an asterisk appears next to the lessons the students have completed.

Students have the following options or restrictions when choosing a lesson:

●   **Unmanaged mode** allows students to choose lessons in any order they want.

●   The **managed mode** expects students to choose the next new lesson in the sequence or to repeat any lesson they did earlier.

It is possible for students in managed mode to choose any new lesson they want; however, when they select a new lesson out of order, the program discourages them by giving the message, "Lessons should be done in order!" (Figure 7). Students can override this feature by entering the number of the lesson again after seeing the message. In the event a Student Program diskette is lost or damaged, students can then continue from the point they reached on the lost or damaged diskette.

Note: When students complete a new lesson out of sequence, the program puts an asterisk next to that lesson and all previous lessons on the Lesson menu. Because of that, the Lesson menu may show that students have completed some lessons when they really haven't.
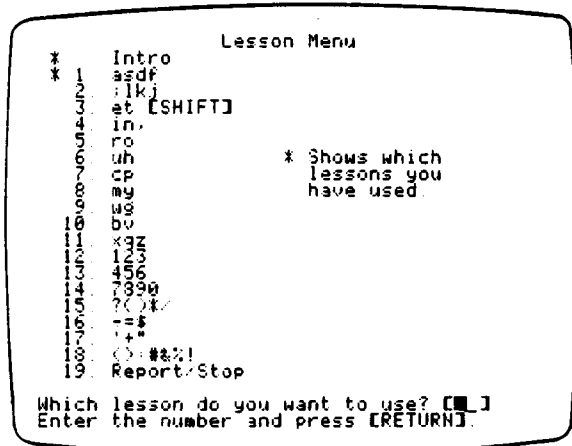
Figure 6
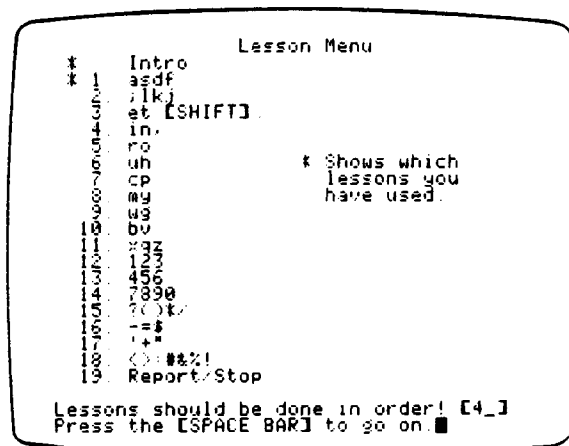
Figure 7

PROGRAM PREVIEW (continued)

9. After students enter the number of a lesson, the program goes to that lesson. Each lesson contains four parts:

*   a preview of the skills in the lesson (Figure 8);

*   an introduction to stroking new keys (Figure 9);

*   practice exercises using new keys (Figure 10);

*   a speed check on new keys (see Step 10).

```
Hi, MARK!
Welcome to Lesson 3.
In this lesson, you will learn how to
use the [E], [T], [SHIFT], and [.]
keys.




Press the [SPACE BAR] to go on.■
```

Figure 8
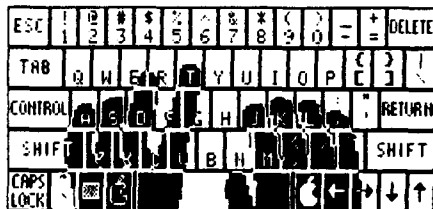
```
ESC ! @ # $ % ^ & * ( ) _ + DELETE
    1 2 3 4 5 6 7 8 9 0 - =
TAB  Q W E R T Y U I O P [ ] |
CONTROL A S D F G H J K L ; ' RETURN
SHIFT  Z X C V B N M , . / SHIFT
CAPS
LOCK

To key [T], move the pointer finger of
your left hand up and a little to the
right.  Keep your little finger on the
[A] key.
Key [T] to go on.■
```

Figure 9

```
Now key the line in the box below.
You may use the left arrow key [◄]
to fix a mistake.
Remember to press each key quickly.
Press [RETURN] when done.

 ┌─────────────────────────────────┐
 │ Key:                            │
 │ ft ft jet east take tease feet  │
 │ ft ft jet ea■                   │
 └─────────────────────────────────┘
```

Figure 10

PROGRAM PREVIEW (continued)

10. At the completion of each lesson, students are given a speed check on the material they have learned (Figure 11).

11. If students enter the speed check line with no more than three errors, they are shown their speed in gross words per minute (Figure 12). Any scores over 99 gross words per minute are reported as 99 gwpm. For information on how speed and accuracy scores are calculated, see Appendix F, "Speed and Calculations."

```
See how quickly you can key the
letters in the box.  If you make a
mistake you may fix it, but you
don't have to   Start when you are
ready.  Press [RETURN] when done.

  ┌─────────────────────────────────┐
  │ Key:                            │
  │ Ted tastes a feast; feels fat.  │
  │ ■                               │
  └─────────────────────────────────┘
```

Figure 11

```
See how quickly you can key the
letters in the box.  If you make a
mistake you may fix it, but you
don't have to.  Start when you are
ready.  Press [RETURN] when done

  ┌─────────────────────────────────┐
  │ Key:                            │
  │ Ted tastes a feast; feels fat.  │
  │ Ted tastes a feast; feel fat    │
  └─────────────────────────────────┘

Your speed is 17 words per minute.

Press the [SPACE BAR] to go on.■
```

Figure 12

No mention is made of errors unless students make more than three of them. In that case, students are told they made too many errors, and they must re-enter the speed check.

PROGRAM PREVIEW (continued)

12. After the speed check, students see a menu giving them five options (Figure 13). The first two options allow students to repeat the speed check section of the lesson. (Students' final three attempts on the speed check are averaged in the managed version to give a score for the lesson.)

The third, fourth, and fifth options allow students to repeat the entire lesson, to continue on to other lessons, or to return to the Lesson menu.

13. When students choose one of the options to leave the lesson, they are shown a graph of their progress (Figure 14).

Students working in managed mode see the results of all their lessons on the graph, whereas students working in unmanaged mode only see results for the lesson just completed.
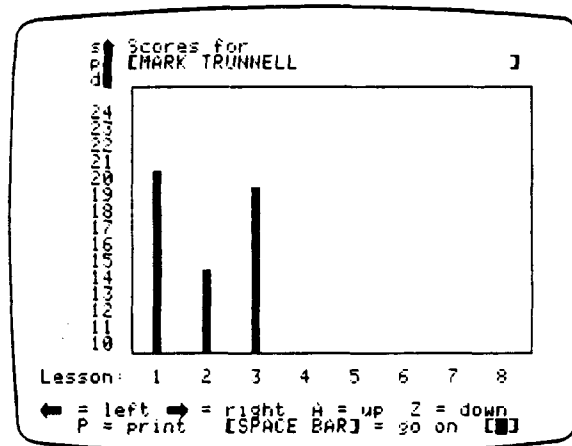
Figure 13

Figure 14

Students can change the portion of the graph displayed by using the Left- and Right-Arrow Keys and the A and Z Keys. Students press **P** to print **the portion of the graph shown on the screen,** at which point they are instructed to prepare the printer. (**Note:** You must have a graphics printer properly installed to use this option. For more information, see Appendix B, "Printer Compatibility.") After the printout is completed, the graph display returns to the screen.

Scores for students working in managed mode are recorded on the Student Program diskette at this point.

When students have finished viewing the graph, they press the Space Bar to continue to the next lesson or return to the Lesson menu.

14. When students have finished working on lessons, they should enter **19** on the Lesson menu to stop.

PROGRAM PREVIEW (continued)

Retrieving Student Records

After students have worked with the Student Program diskette(s), the teacher can retrieve information about their progress by using the Teacher Utilities diskette and the Student Program diskette(s). To generate a Keyboarding Primer report, follow these steps:

Combining Student Records

1. Gather your materials. You need:

    a. Keyboarding Primer Teacher Utilities diskette;

    b. Keyboarding Primer Student Program diskette(s);

    You need only the Student Program diskettes containing the information you want in your report. It is not necessary to gather diskettes that contain student records you don't want, such as diskettes used by another class but not yours, or diskettes that contain no student records, such as backups.

    c. an Apple //e or //c computer;

    d. a printer (see Appendix B).

2. Put the Keyboarding Primer Teacher Utilities diskette into Drive 1 and turn on your computer. You will see the main menu (Figure 1).

3. Select Option 1, "Manage Student Records."

4. Enter your name when the program asks for it (Figure 2).

```
              Keyboarding Primer
              Teacher Utilities
     _____

     1. Manage Student Records

     2. Cleanup

     3. Descriptions

     4. End



     Which program do you want to use? [ ]
```

Figure 1

```
              Keyboarding Primer
              Management - Disk A
     _____


     Please enter your last name
     and press [RETURN].


     Then enter the initial for
     your first name and press [RETURN].

     Last name [SMITH_____]
     Initial   [S ]



     Press [ESC] to enter again.
```

Figure 2

18
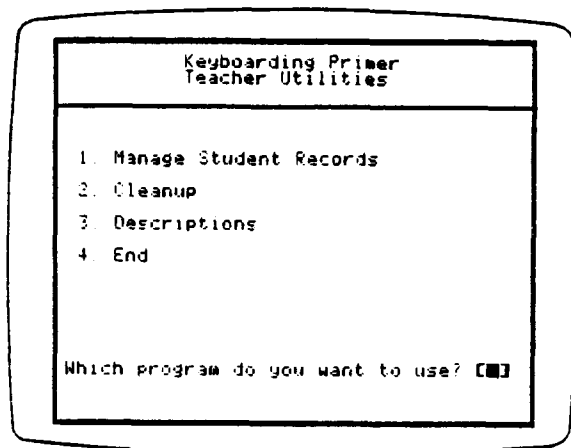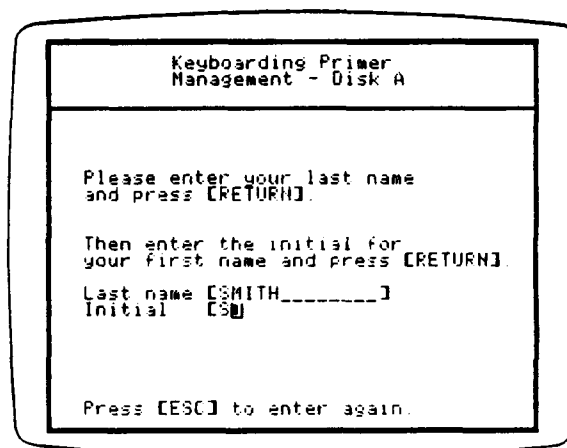
PROGRAM PREVIEW (continued)

The program will then show you the Management Menu (Figure 3).

5. Select Option 1, "Combine records from disks." If you are using only one Student Program diskette, go directly to Step 8. If you are using more than one Student Program diskette, you will see a menu listing all diskettes in the set (Figure 4).

```
      Keyboarding Primer
     Management - Disk A
   ─────────────────────────
        Management Menu
 1. Combine records from disks
 2. List current class roster
 3. List individual student record
 4. Print a class profile
 5. Delete records on class files
 6. Stop

Which option do you want to use? [■]
```

```
Disk Set: A       5 disks defined.
→Disk 1        Disk 3      Disk 5
 Disk 2        Disk 4




◄ or ► = move arrow   A = all
[RETURN] = select/erase   [ESC]=menu
Press the [SPACE BAR] to continue.
```
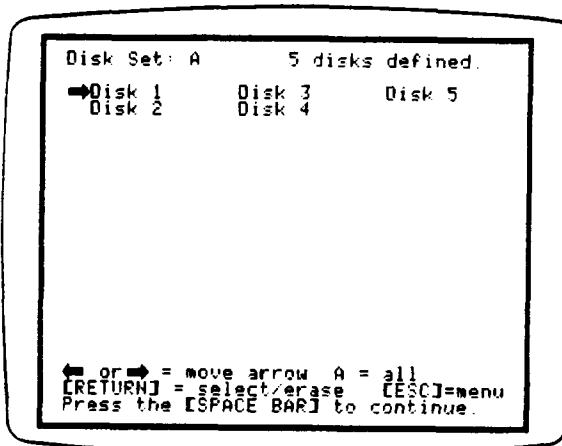
Figure 3   **Figure 4**

All student records are kept on the Student Program diskette(s), so each time you ask for a report, you must "combine" the data from the Student Program diskette(s). (No student records are stored on the Teacher Utilities diskette.)

6. Highlight each diskette from which you want to get information by using the arrow keys to move the marker to the diskette name and then pressing the Return Key. (Press the Return Key when the arrow is pointing to a highlighted diskette to remove the highlighting.) Or enter **A** to highlight all diskettes in the set.

7. Press the Space Bar when you have finished choosing diskettes to include in your report.

19

PROGRAM PREVIEW (continued)

8. The program will then tell you to put in a Student Program diskette (Figure 5). If you are using only one Student Program diskette, put in this diskette. If you are using more than one Student Program diskette, put in the diskettes chosen in Step 6 one at a time.

    A percentage figure in the upper right-hand corner of your screen will show you how many student records have been combined. The percentage is based on the maximum number of 48 student records per class, and it tells you what percentage of 48 student records have been combined. Each student record accounts for about 2%. For example, 50% indicates that the program has combined 24 student records.

9. When you have finished combining student records, the program returns to the Management Menu (see Figure 2). You can now choose to:

    ● list the current class roster (see Step 10);

    ● list individual student records (see Step 11);

    ● print a class profile (see Step 12).

Listing a Class Roster

10. To list the current class roster:

    a. Select Option 2, "List current class roster," on the Management Menu.

    b. You will see three options for displaying the class roster (Figure 6). Select the format you want for displaying the class roster.

    c. After displaying the class roster, the program will return to the menu showing formats for listing the class roster (Figure 6). When you are done working with the class roster, select Option 4 to return to the Management Menu.

```
        Keyboarding Primer
        Management - Disk A


  Remove the disk from the
  disk drive

  Insert a Student Tutorial
  disk into the disk drive






  Press [ESC] to return to options.
  Press the [SPACE BAR] to continue.■
```

Figure 5

```
        Keyboarding Primer
        Management - Disk A


  Teacher  S. SMITH

  Options:

    1. List the class roster on the
       screen

    2. List the class roster on a
       printer

    3. List the class roster by disk
       on a printer

    4. Return to the menu

  Which option do you want to use? [■]
```

Figure 6

20
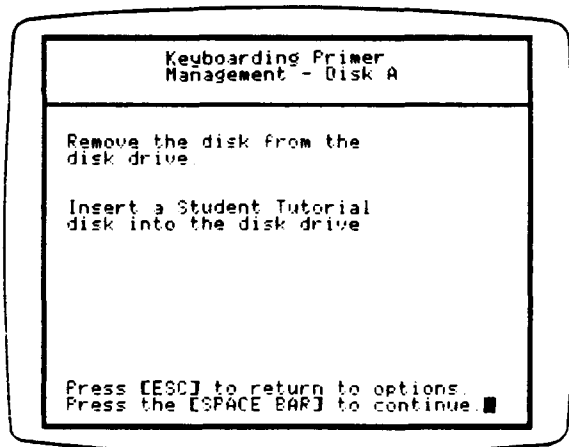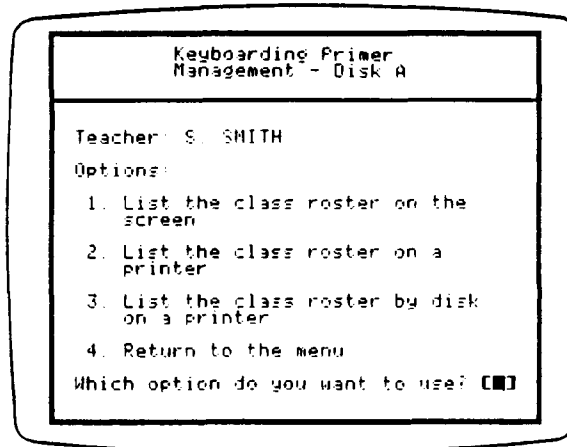
PROGRAM PREVIEW (continued)

Listing Individual Student Records

11. To list individual student records:

    a. Select Option 3, "List individual student record," on the Management Menu.

    b. You will see three options for displaying individual student records (Figure 7). Select a format for displaying the student information.

    c. After selecting the format for displaying the record, enter the name of the student (Figure 8).

        Note: If you choose to see the individual student graph (Figure 9), you can see other parts of the graph on the screen by using the Left- and Right-Arrow Keys and the A and Z Keys. If you have a graphics printer, you can press **P** to print **the portion of the graph that is shown on the screen.**

Figure 7

Figure 8

Figure 9

21
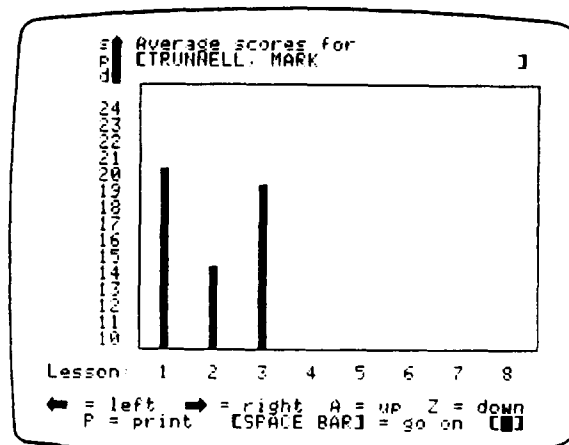
PROGRAM PREVIEW (continued)

d.   After displaying the student record, the program will return to the menu showing formats for displaying individual student records (see Figure 7). When you are done viewing individual student records, select Option 4 to return to the Management Menu.

Printing a Class Profile

12.   To print a class profile:

a.   Select Option 4, "Print a class profile," on the Management Menu.

b.   The program will print a table containing all students in your combined list and their scores on each of the eighteen lessons in Keyboarding Primer. This option can only be used with a printer.

Note: The scores that are shown are the average scores of the last three tries students made on the speed check at the end of the lesson. Student scores are reported in gross words per minute (gwpm). Student scores in excess of 99 gwpm are shown as 99. For information on how speed scores are calculated, see Appendix F, "Speed and Error Calculations."

c.   When the class profile has finished printing, the program returns to the Management Menu.

Ending

13.   When you have finished retrieving the student records, you return to the Management Menu. Choose Option 6 to leave the Management Menu.

Note: When you leave the Management Menu, the records you have combined are lost. You must start by combining student records each time you enter the Management Menu.

PROGRAM PREVIEW (continued)

Deleting Student Records

When the student records for a class or an individual are no longer needed, they can be deleted to make room for new records. There are two ways to delete records. The method you choose depends upon your intended outcome:

- **Deleting Individual Student Records.** The first method allows you to delete the records of one or more students in a class while leaving intact all management modifications you have made on the Student Program diskette(s). There is no effect on the records of the remaining students in the class, and the diskettes continue in managed mode as before (see Step 1).

- **Deleting the Records of an Entire Class.** The second method deletes the records of an entire class, including any references to the teacher, on the Teacher Utilities diskette and Student Program diskette(s). To use managed mode again, you must repeat the steps you originally followed in preparing the Student Program diskettes for managed mode (see Step 7).

Deleting Individual Records

1. To delete individual student records, you must first "combine" the records you want to delete. To combine student records, follow Steps 1-8 under the "Retrieving Student Records" section (pages 18-22).

2. When you have finished combining student records, the program returns to the Management Menu (Figure 1). Select Option 5, "Delete records on class files."

3. You next see two options for deleting the records you have combined (Figure 2). Select Option 1 to delete an individual student record (see Step 4) or Option 2 to delete all of the student records you have combined (see Step 5).

```
        Keyboarding Primer
        Management - Disk A
        ─────────────────────
          Management Menu
 1. Combine records from disks
 2. List current class roster
 3. List individual student record
 4. Print a class profile
 5. Delete records on class files
 6. Stop

Which option do you want to use? [■]
```

```
        Keyboarding Primer
        Management - Disk A
        ─────────────────────
 .Options:
     1  Delete a student record
     2  Delete all combined records
     3  Return to the menu

Which option do you want to use? [■]
```

Figure 1   Figure 2

23
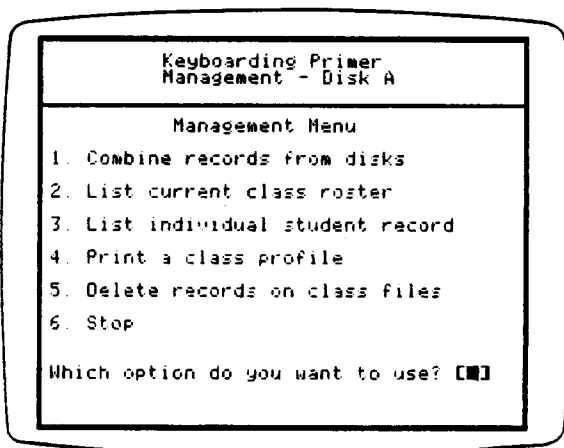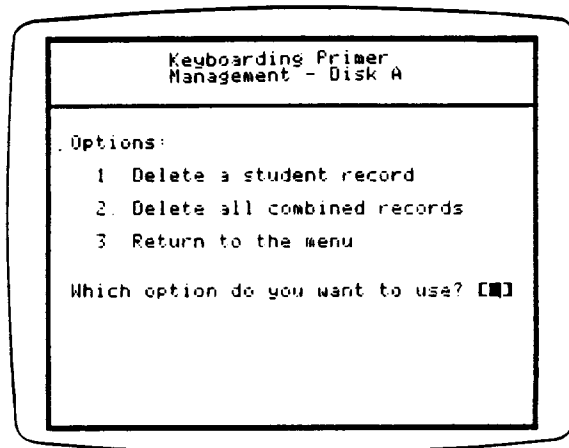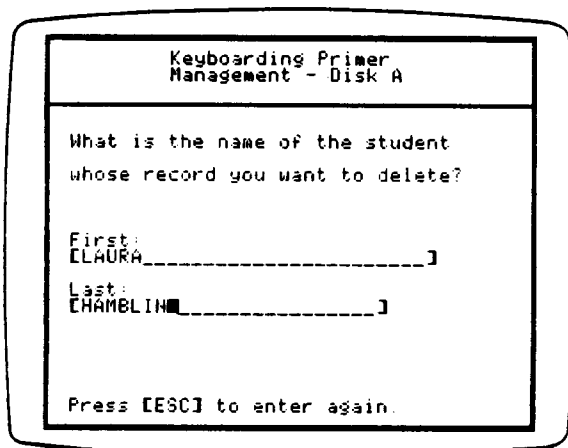
PROGRAM PREVIEW (continued)

4. If you choose to delete an individual student record:

    a. The program will ask you to enter the name of the student (Figure 3).

    b. The program will ask you to enter a special code (/D) to verify that you really want to delete the record (Figure 4).
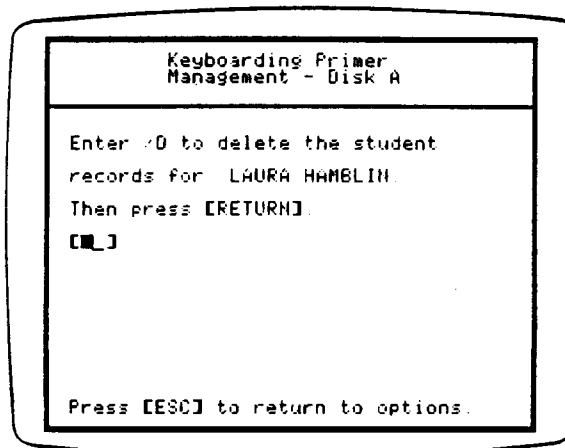
```
        Keyboarding Primer
        Management - Disk A
-----------------------------------
What is the name of the student
whose record you want to delete?


First:
[LAURA_____]
Last:
[CHAMBLIN_____]



Press [ESC] to enter again.
```

Figure 3
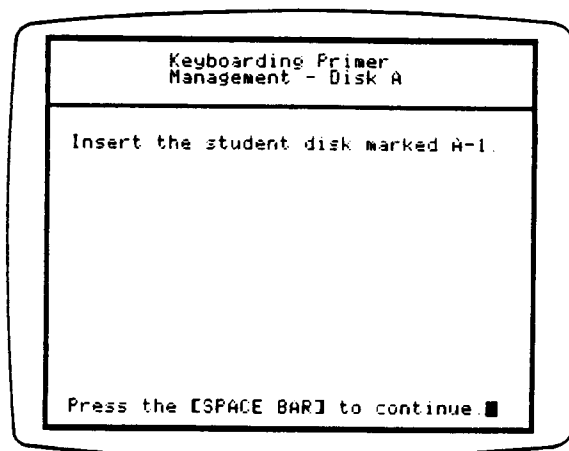
```
        Keyboarding Primer
        Management - Disk A
-----------------------------------
Enter /D to delete the student
records for  LAURA HAMBLIN
Then press [RETURN].
[█_]




Press [ESC] to return to options.
```

Figure 4

    c. The program will tell you which Student Program diskette to put into the computer (Figure 5). Put in the diskette and press the Space Bar. The record will be deleted.

```
        Keyboarding Primer
        Management - Disk A
-----------------------------------
Insert the student disk marked A-1.







Press the [SPACE BAR] to continue.█
```

Figure 5

24

PROGRAM PREVIEW (continued)

5.   If you choose to delete all student records you have combined:

   a.   The program will ask you to enter a special code (/D) to verify that you really want to delete the records (Figure 6).

```
Keyboarding Primer
Management - Disk A

Enter /D to delete all student
records currently combined.
Then press [RETURN]
[█_]




Press [ESC] to return to options.
```
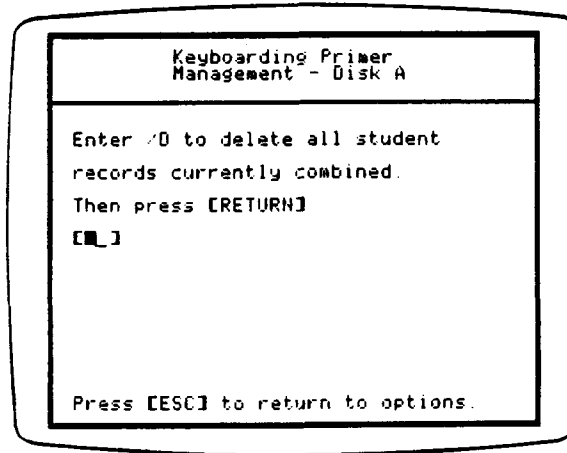
Figure 6

   b.   The program will tell you which Student Program diskette(s) to put in (Figure 7). Put in the diskette(s) and press the Space Bar. The records will be deleted.

   c.   After deleting student records, the program tells you how many records it deleted (Figure 8), then returns to the Management Menu.

6.   When you are done deleting individual student records, select Option 6 to leave the Management Menu.

```
Keyboarding Primer
Management - Disk A

Insert the student disk marked A-1.






Press the [SPACE BAR] to continue.█
```

Figure 7

```
Keyboarding Primer
Management - Disk A

4 records have now been deleted.






Press the [SPACE BAR] to continue █
```

Figure 8

25
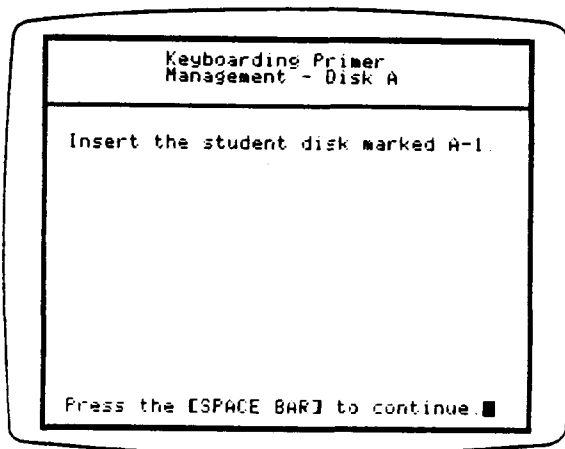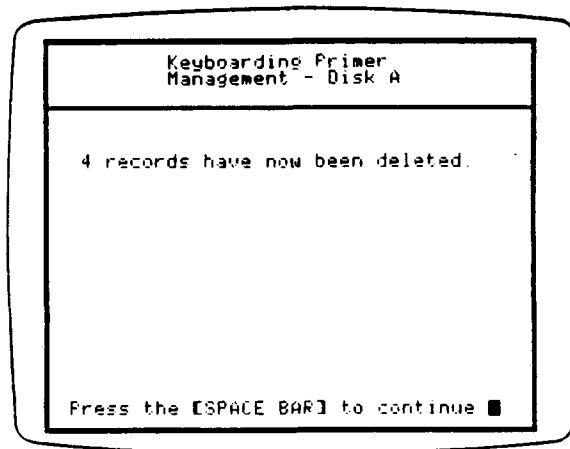
PROGRAM PREVIEW (continued)

Deleting the Records of an Entire Class

7. To delete the records of an entire class, begin by gathering your materials. You need:

   a. Keyboarding Primer Teacher Utilities diskette;

   b. Keyboarding Primer Student Program diskette(s);

   Gather all diskettes in "Disk Set A" that were prepared to be used by your class.

   c. an Apple //e or //c computer.

8. Put the Teacher Utilities diskette into Drive 1 and turn on your computer. You will see the main menu (Figure 9).

9. Select Option 2, "Cleanup." The program will describe this option and ask if you really want to do it. Enter **Y** to continue.

10. The program shows you a menu listing the teachers with records on the diskette and then asks you to enter the number of the teacher whose information you want to delete (Figure 10). Enter the number.

```
        Keyboarding Primer
        Teacher Utilities
   ─────────────────────────────

   1  Manage Student Records
   2  Cleanup
   3  Descriptions
   4  End



   Which program do you want to use?  [█]
```

Figure 9

```
        Keyboarding Primer
        Cleanup - Disk A
   ─────────────────────────────

   List of teachers:
      1  S  SMITH
      2  P  BALLIF


   Enter the number of the teacher
   whose information you want
   to delete.  [█]
   Press [ESC] when finished.
```
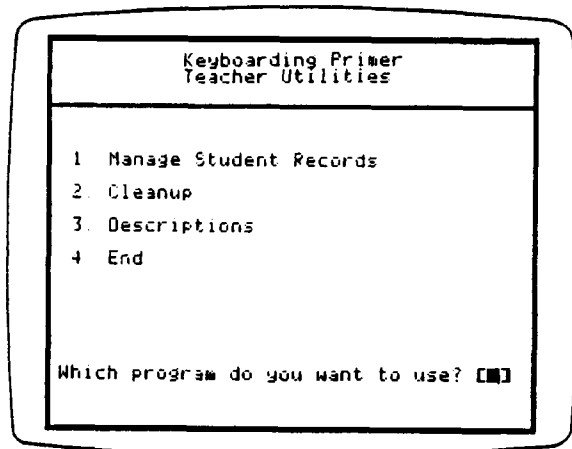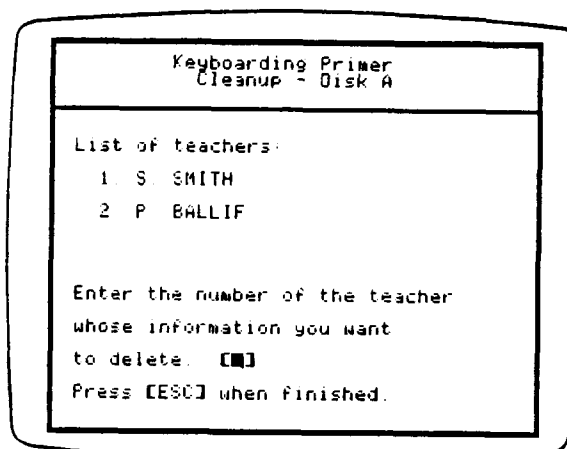
Figure 10

PROGRAM PREVIEW (continued)

11. The program once again asks you to verify that you really want to delete the records (Figure 11). Enter **Y** to continue.

12. The program tells you to put in the Student Program diskette(s) one at a time. Put in the diskette(s) and press the Space Bar. The information is deleted. If a Student Program is lost or damaged, press the **S** Key to skip that diskette when the program asks for it.

13. When you are done, the program informs you that all of the information for the given teacher has been deleted (Figure 12). Press the Space Bar to continue.

14. If other teachers still have records on the diskettes, the program returns to the list of teachers (see Figure 10). Press the Escape Key to return to the main menu. If there are no other records on the diskette, the program returns to the main menu.

```
          Keyboarding Primer
             Cleanup - Disk A
_____

 Are you sure you want to delete

 all teacher information from

 disk set A for: S. SMITH

 [█__]

 Enter YES or NO and press [RETURN].
```

Figure 11

```
          Keyboarding Primer
             Cleanup - Disk A
_____

 All information for:

 S. SMITH

 has been deleted from disk set A.




 Press the [SPACE BAR] to continue.█
```
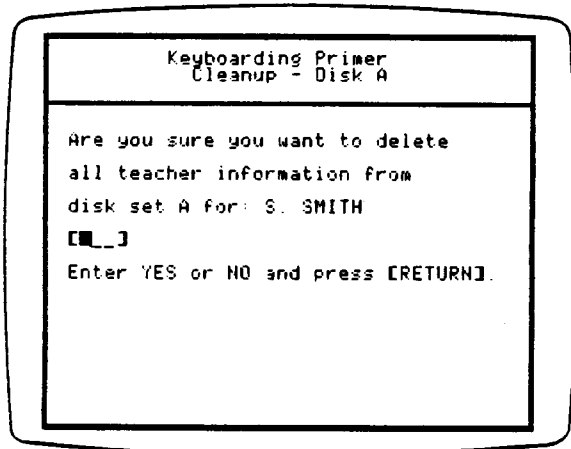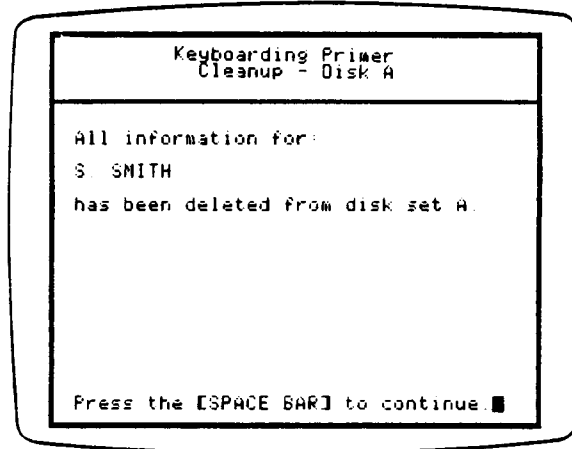
Figure 12

USE IN AN INSTRUCTIONAL SETTING

Preparation

If you want students to use the Student Program diskette(s) in **managed mode,** you must prepare the diskette(s) as outlined in the section titled "Preparing Student Program Diskettes" (pages 7-10).

If students will be printing their lesson scores, you should set up the printer, make certain that it works correctly, and then instruct students on how to use it to get copies of their scores at the end of the lessons. (For more information on using a printer, see Appendix B, "Printer Compatibility.")

Using the Program

If students will use the Student Program diskette(s) in **unmanaged mode,** you may want to copy and distribute the handout, "Student Track Sheet," before students begin (see page 29). Students can track their progress on this sheet.

Students should be comfortable at the keyboard in order to use the lessons effectively. This may require that you adjust chairs or desks, supply footrests for students who cannot reach the floor, or provide pillows for students to sit on.

One of your major roles as a teacher is to be a resource to students. You may need to give occasional reminders on technique. A list of proper fingering positions is listed in Appendix E, "Fingering Positions." You may refer to this listing to find the correct stroking for any key taught in the lessons.

Students should be encouraged to complete the lessons in order because later lessons build on letters taught in earlier lessons.

It is recommended that students work at the computer individually. Keyboarding is learned primarily through kinesthetics, so there is little to be gained by students who watch other students complete the lessons.

Follow-up

As students are using the package, it is recommended that you give them frequent feedback and encouragement on their progress toward the objectives. The best way to get information about student progress is to monitor student scores on the lessons. It is not recommended that you test students' typing formally while they are learning with Keyboarding Primer.

When students have completed all eighteen lessons, they are ready for the next product in this series, Keyboarding Master.

Additional sources of information and help are listed in Appendix G, "Bibliography."

Name: _____

When you finish a lesson, put your score in the box in front of that lesson number.

Score	No.	Lesson
		Intro
	1.	asdf
	2.	;lkj
	3.	et [Shift].
	4.	in,
	5.	ro
	6.	uh
	7.	cp
	8.	my
	9.	wg
	10.	bv
	11.	xgz
	12.	123
	13.	456
	14.	7890
	15.	?()*/
	16.	-=$
	17.	'+"
	18.	<>:#&%!

mecc

APPENDICES

CREDITS

<u>MECC Keyboarding Primer</u> was developed by Total Information Educational Systems (TIES) of Roseville, Minnesota. The lessons were designed by Dr. Gary McLean of the University of Minnesota and the text was composed by Nancy Jacobson. This manual was written by Loren Sucher of the MECC Software Development staff.

APEXTEXT, the character generator program used in this package, is copyrighted by Tim Cimbure, 1318 Skywood Lane, Fridley, Minnesota.

Production of this package was funded in part by the Minnesota High Technology and Educational Improvement Act.

TO THE READER:

MECC has made every effort to ensure the instructional and technical quality of this courseware package. Your comments—as user or reviewer—are valued and will be considered for inclusion in any future version of the product. Please address comments to:

MECC Courseware Development
3490 Lexington Avenue North
St. Paul, MN 55126

PRINTER COMPATIBILITY

Two kinds of printing are used in <u>Keyboarding Primer</u>:

Graphics for printing of student graphs either by the student (from a Student Program diskette) or from the Teacher Utilities diskette.

Text printing for paragraphs or for reports from the Teacher Utilities diskettes.

This product does not have a "Printer Support" option. Instead, the programs are set in advance to work with a variety of printers. The following tables list the interface cards and printers that will work for each option. While other combinations may work, these combinations are known to work. If a listed combination does not seem to work, check your printer manual. The DIP switches may not be set correctly for the printer you are using.

Note: Your printer interface card must be in Slot 1 of your computer.

GRAPHICS PRINTING

Interface Card	Printers
Grappler	Epson MX80 Epson FX80
Grappler+	Epson MX80 Epson FX80 Apple DMP
Print-It!	Epson MX80 Epson FX80 Apple DMP
Super Serial	Image Writer

TEXT PRINTING

Interface Card	Printers
Grappler	Epson MX80 Epson FX80 Apple DMP
Grappler+	Epson MX80 Epson FX80 Apple DMP
CCS Serial	Malibu 200
Parallel	Malibu 165
Print-It!	Epson MX80 Epson FX80 Apple DMP
Super Serial	Image Writer

USING A CORVUS SYSTEM
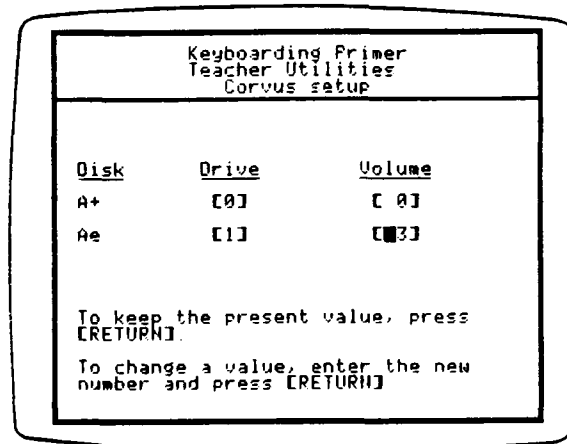
Installing Keyboarding Primer on a Corvus System

Keyboarding Primer has been modified to work with a Corvus hard disk drive using the Omninet operating system. To install the programs, you must obtain the MECC Corvus Crossload System and follow the directions that come with it.

When you install the package, assign the Student Program diskette to one volume and the Teacher Utilities diskette to another volume. You will be asked to define user codes. Give the students "read" and "write" access to the Student Program volume, and give the teacher "read" and "write" access to both the Student Program volume and the Teacher Utilities volume. **Note:** If you do not know how to assign access codes, consult with the person who manages your Corvus system.

Each time you sign on to use the Teacher Utilities volume, a setup screen appears (Figure 1). The first time a teacher logs on, the drive and volume numbers are set to "0"; the teacher should enter the drive and volume numbers where the Teacher Utilities volume can find the Student Program volume. Whenever the setup screen appears thereafter, the drive and volume numbers for the Student Program volume will appear automatically.

Note: Keyboarding Primer works only on the Apple //e and Apple //c. Therefore, you should ignore the first row of disk and volume numbers (following the "A+") and set only the values for the second row (following the "Ae").

```
                Keyboarding Primer
                Teacher Utilities
                  Corvus setup


     Disk        Drive         Volume

     A+          [0]           [ 0]

     Ae          [1]           [ 3]



     To keep the present value, press
     [RETURN].

     To change a value, enter the new
     number and press [RETURN]
```

Figure 1

Operating Keyboarding Primer on a Corvus System

When teachers or students use Keyboarding Primer, the Corvus system keeps track of who is using the programs. Keyboarding Primer uses that information to protect the student records on the Student Program volume by allowing only one user at a time to access the records. For example, if students are using the Student Program

volume, the Corvus system will not allow you to use the Teacher Utilities volume. If you are working on the Teacher Utilities volume, the Corvus system will not allow students to use the Student Program volume, nor will it allow a second teacher to access the Teacher Utilities volume.

Note: Because of the way the Corvus system keeps track of students or teachers who are using the system, it is extremely important that teachers and students always choose "Stop" or "End" on the main menu to leave the Keyboarding Primer volumes. It is equally important that they follow through by answering the questions until the computer leaves the program completely.

Teachers and students should never exit from Keyboarding Primer by turning off their computers or pressing the Reset Key. If you exit in either of those two unexpected ways, the Corvus system will not know you have left and may deny access to future users.

For example, if you turn off the computer or press the Reset Key before completely leaving the Teacher Utilities volume, the Corvus system will think you are still on the system and will not allow students or other teachers to log onto Keyboarding Primer. If students turn off their computers or press the Reset Key, the Corvus system will deny you access to the Teacher Utilities volume and may deny access to or refuse to record scores for other students on the system.

What to Do When Users Improperly Exit from Keyboarding Primer

If a teacher or student has improperly exited, causing other users to have problems, follow these steps:

1. Attempt to access the Teacher Utilities volume from a computer attached to the Corvus system.

2. The program will tell you that a "semaphore" is on (Figure 2 or 3). A semaphore is like a "string around your finger." The Corvus system turns on a semaphore to help Keyboarding Primer keep track of who is using the system.

```
        Keyboarding Primer
        Teacher Utilities


A teacher semaphore named KBATEACH
is on. There could be a teacher
currently working! Do you want to
run the SEMAPHORE UTILITY program
to clear it? [■__]
Enter YES or NO and press [RETURN]
```

```
        Keyboarding Primer
        Teacher Utilities


A student semaphore named KBAST001
is on  There could be a student
currently working! Do you want to
run the SEMAPHORE UTILITY program
to clear it? [■__]
Enter YES or NO and press [RETURN]
```

Figure 2   34   Figure 3

USING A CORVUS SYSTEM (continued)

The program will ask you if you want to run SEMAPHORE UTILITY to clear the semaphore. Answer **Yes** to continue.

3.   You will then see the SEMAPHORE UTILITY screen (Figure 4). The screen has room for 32 semaphores. The Keyboarding Primer semaphores all begin with the letters KBA (for Keyboarding Volume A). There may also be semaphores turned on from other packages.


```
                   SEMAPHORE UTILITY

    FLAG  1-[CABST003]    FLAG 17-[        ]
    FLAG  2-[        ]    FLAG 18-[        ]
    FLAG  3-[KBAST001]    FLAG 19-[        ]
    FLAG  4-[TSTST001]    FLAG 20-[        ]
    FLAG  5-[        ]    FLAG 21-[        ]
    FLAG  6-[        ]    FLAG 22-[        ]
    FLAG  7-[        ]    FLAG 23-[        ]
    FLAG  8-[        ]    FLAG 24-[        ]
    FLAG  9-[        ]    FLAG 25-[        ]
    FLAG 10-[        ]    FLAG 26-[        ]
    FLAG 11-[        ]    FLAG 27-[        ]
    FLAG 12-[        ]    FLAG 28-[        ]
    FLAG 13-[        ]    FLAG 29-[        ]
    FLAG 14-[        ]    FLAG 30-[        ]
    FLAG 15-[        ]    FLAG 31-[        ]
    FLAG 16-[        ]    FLAG 32-[        ]

    HELP    SET    CLEAR    QUIT  [_]
```
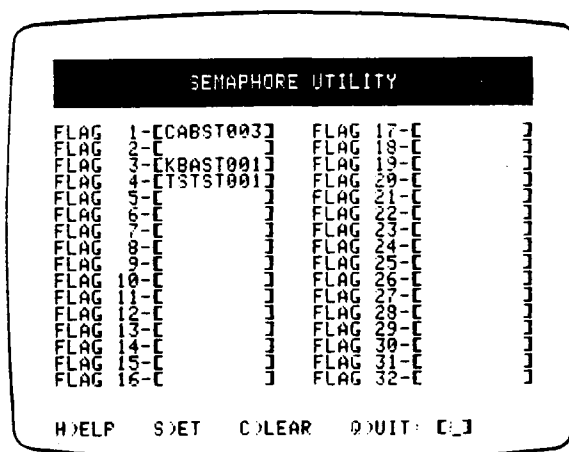
Figure 4

The Corvus system uses four different semaphores to keep track of who is using Keyboarding Primer. You must decide which semaphore to clear. (In keeping with the analogy, you must remove the string from the finger so Keyboarding Primer doesn't think it is still busy with the person who exited improperly.) Use the list below to identify which semaphore you must clear:

KBATEACH – The Corvus keeps this semaphore on the entire time you are using the Teacher Utilities volume. If you exit improperly, this semaphore will stay on and stop any other teacher or students from accessing Keyboarding Primer. Students will see the message, "A teacher is working," when trying to log on, or a teacher will see a screen telling that the "semaphore KBATEACH is on" (see Figure 2).

Make sure no teachers are using the Teacher Utilities volume. You can then clear this semaphore, and a teacher or students can log on.

KBAST001 – (The number "001" at the end may differ.) The Corvus keeps this semaphore on the entire time students are using the Student Program volume. Each time a new student logs on, the number (001) increases by 1, so the Corvus can tell how many students are using the Student Program volume. If one or more students exit improperly, this sempahore will stay on, preventing you from using the Teacher Utilities volume. When you try to log onto the Teacher Utilities volume, you

will see a screen telling you that the "Semaphore KBAST001 is on" (see Figure 3).

Note: This semaphore will not prevent other students from logging on.

Make sure no students are using the Student Program volume. You can then clear this semaphore and use the Teacher Utilities volume.

KBAUPDTE - This semaphore is on for just a few moments each time the Student Program volume records data for a student. If a student exits improperly while the program is saving scores for a lesson, this semaphore may stay on, preventing the program from saving other students' scores. Students will get the message "Waiting to update!"

If the message remains, clear this sempahore and the other students will be able to continue.

KBALOGON - This semaphore is on for just a few seconds each time a student logs on or off of the Student Program volume. After the student successfully logs on or off, the semaphore goes off. If a student exits improperly while logging on or off, this semaphore may be left on, preventing other students from logging on or off. Students will see the message "Waiting to log on" or "Waiting to log off."

If the message remains and if the KBATEACH semaphore isn't on, clear this semaphore. Students then will be able to log on.

4.   Once you've determined which semaphore to clear, type **C** and press the Return Key.

5.   Type the number of the semaphore you want to clear and press the Return Key. The listing on the screen changes to show that the semaphore was cleared.

6.   Press **Q** and press the Return Key when you are done clearing the semaphores.

7.   When the necessary semaphores are cleared, the program will go into the Teacher Utilities volume. You may then use the Teacher Utilities volume or exit using the "End" option.

If semaphores remain on that prevent you from going into the Teacher Utilities volume (for example, you might have only cleared the KBALOGON or KBAUPDTE semaphore and the KBAST001 remains on), the program will return to the question asked in Step 2. If you have cleared the semaphores you needed to clear, you should answer **No** to the question. The program then ends.

FINGER LABELS
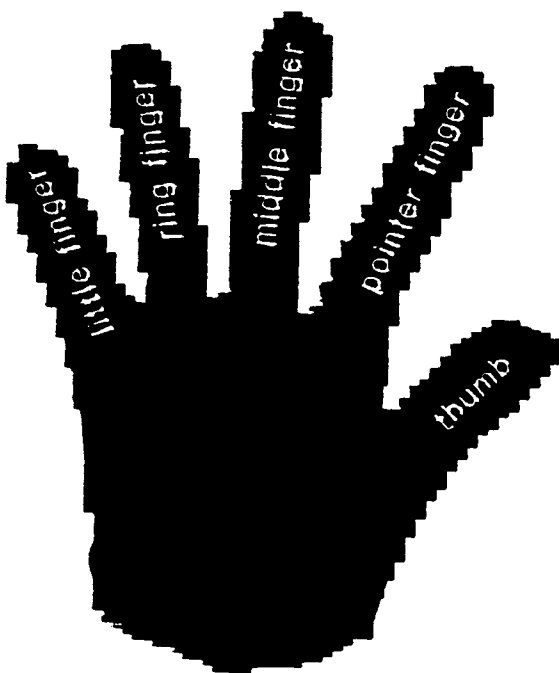
LEFT   **RIGHT**

FINGERING POSITIONS
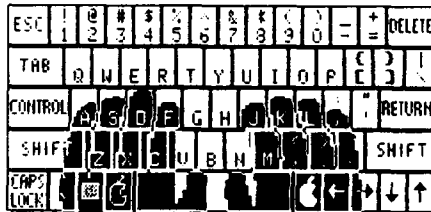
A   Left Little Finger
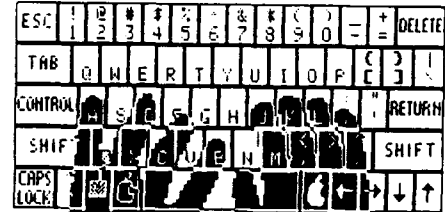
B   Left Pointer Finger
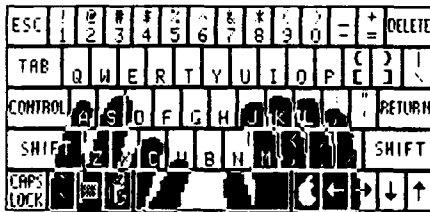
C   Left Middle Finger
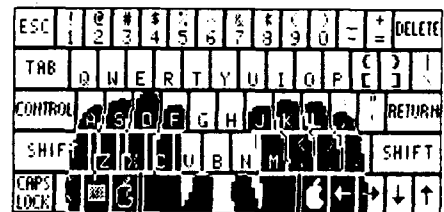
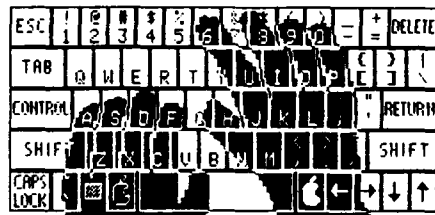**D**   Left Middle Finger
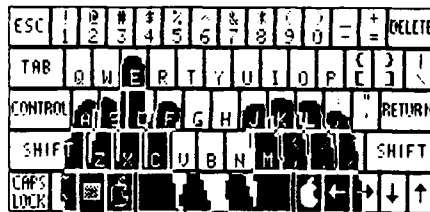
E   Left Middle Finger
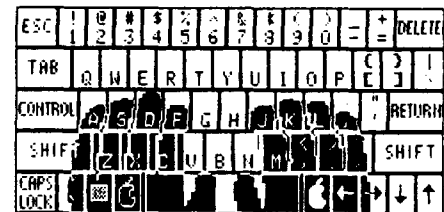
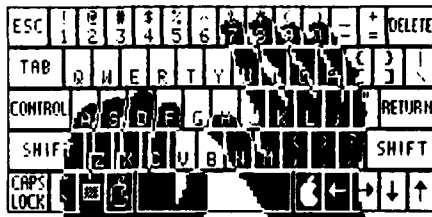
F   Left Pointer Finger
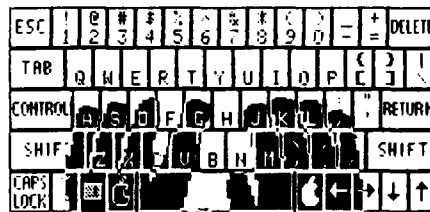
G   Left Pointer Finger

H   Right Pointer Finger

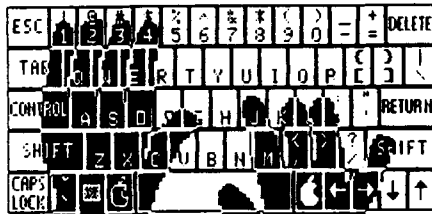# FINGERING POSITIONS (continued)
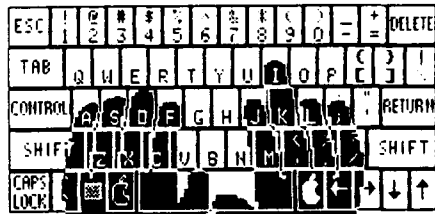
I   Right Middle Finger
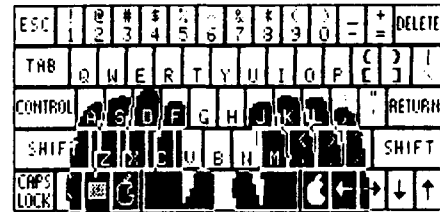
J   Right Pointer Finger
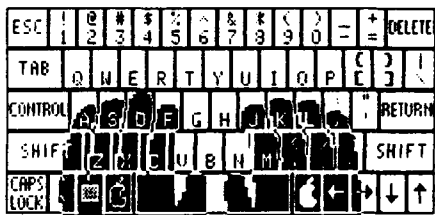
K   Right Middle Finger
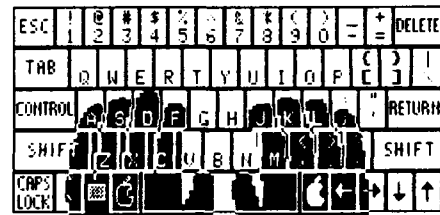
L   Right Ring Finger
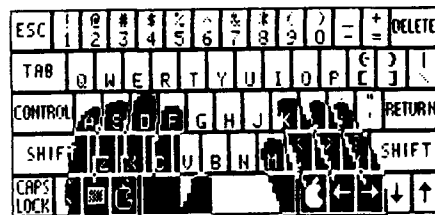
M   Right Pointer Finger
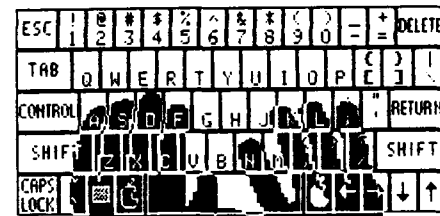
N   Right Pointer Finger
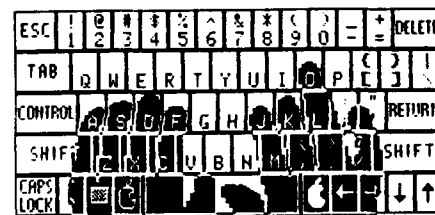
O   Right Ring Finger
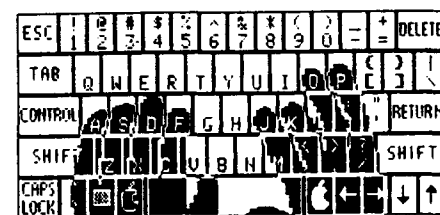
P   Right Little Finger

39

FINGERING POSITIONS (continued)

Q   Left Little Finger
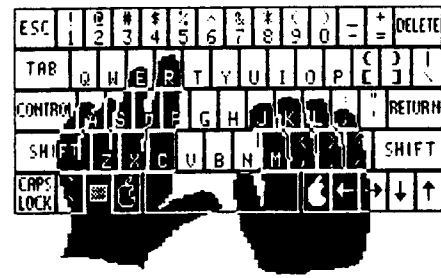
R   Left Pointer Finger
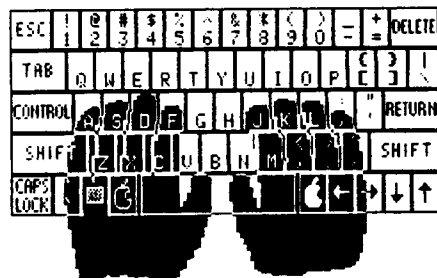
S   Left Ring Finger

T   Left Pointer Finger
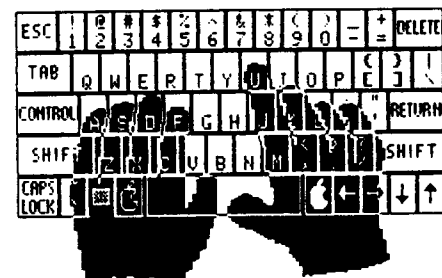
U   Right Pointer Finger

V   Left Pointer Finger
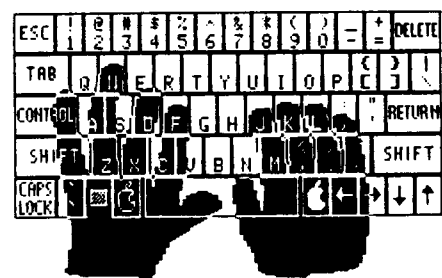
W   Left Ring Finger
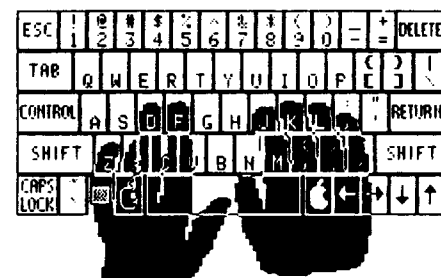
X   Left Ring Finger

FINGERING POSITIONS (continued)
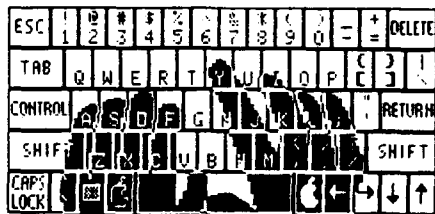
Y   Right Pointer Finger
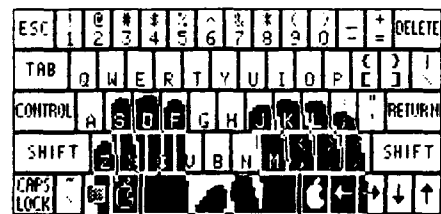
Z   Left Little Finger
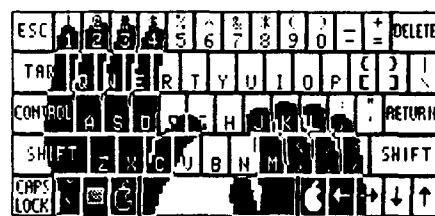
1   Left Little Finger
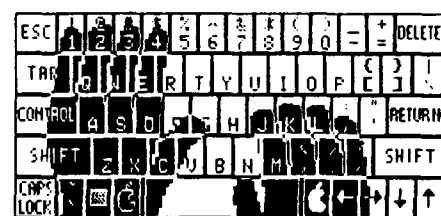
2   Left Ring Finger
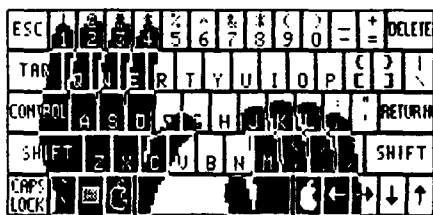
3   Left Middle Finger
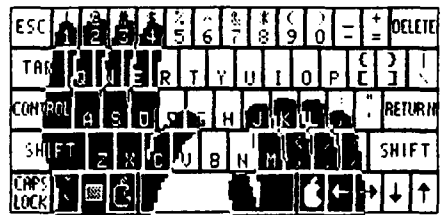
4   Left Pointer Finger

5   Left Pointer Finger

6   Right Pointer Finger

FINGERING POSITIONS (continued)

7   Right Pointer Finger

8   Right Middle Finger
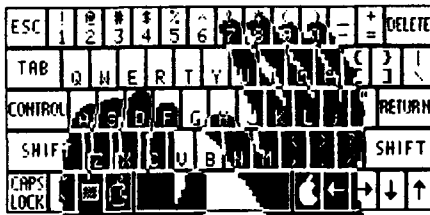
9   Right Ring Finger
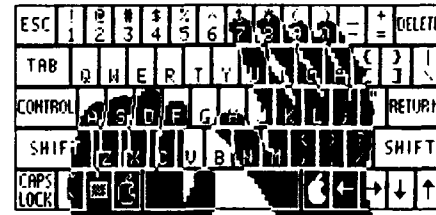
0   Right Little Finger

!   Left Little Finger on 1
       Right Little Finger (Shift Key)
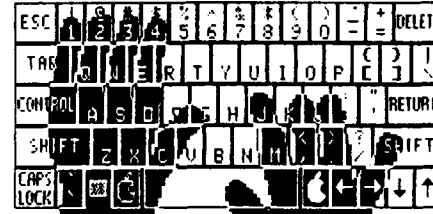
@   Left Ring Finger on 2
       Right Little Finger (Shift Key)
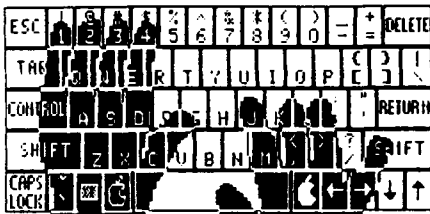
Left Middle Finger on 3
       Right Little Finger (Shift Key)
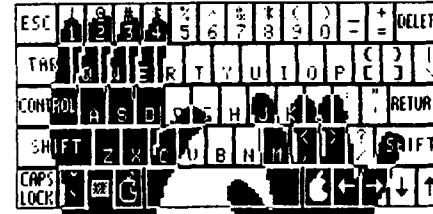
$ Left Pointer Finger on 4
       Right Little Finger (Shift Key)

FINGERING POSITIONS (continued)
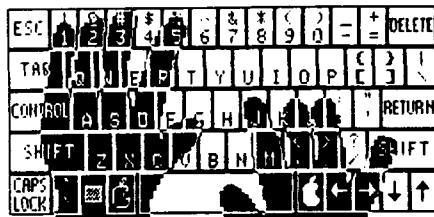
%   Left Pointer Finger on 5
Right Little Finger (Shift Key)
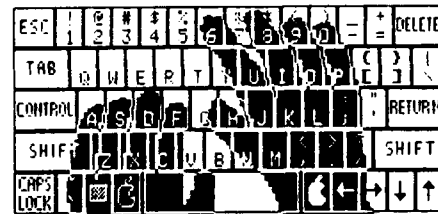
^   Right Pointer Finger on 6
Left Little Finger (Shift Key)
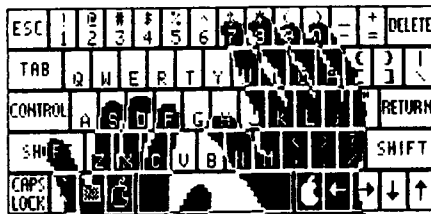
&   Right Pointer Finger on 7
Left Little Finger (Shift Key)
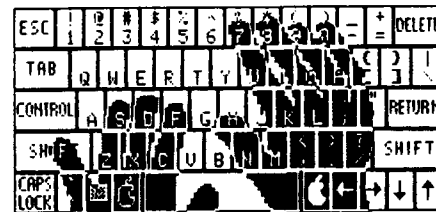
*   Right Middle Finger on 8
Left Little Finger (Shift Key)
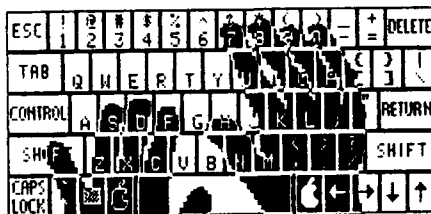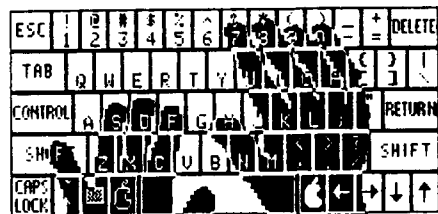
(Right Ring Finger on [
Left Little Finger (Shift Key)

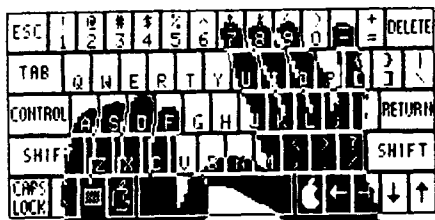**)**   Right little Finger on]
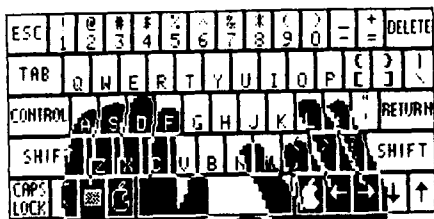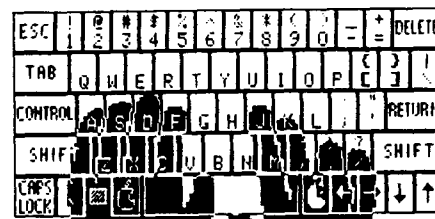Left Little Finger (Shift Key)

–   Right Little Finger

=   Right Little Finger

43

FINGERING POSITIONS (continued)

–   Right little Finger on –
Left Little Finger (Shift Key)

+   Right Little Finger on =
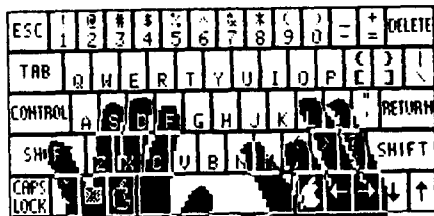Left Little Finger (Shift Key)

,   Right Middle Finger
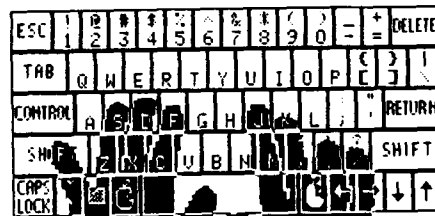

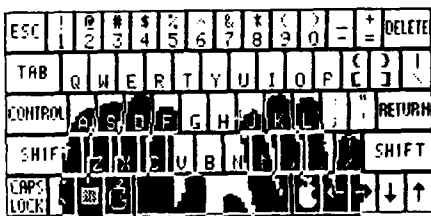.   Right Ring Finger

<   Right middle Finger on ,
Left Little Finger (Shift Key)

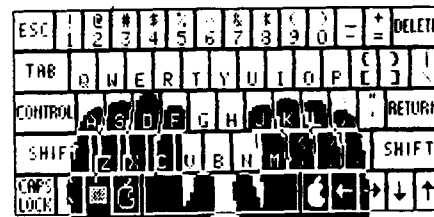>   Right Ring Finger on .
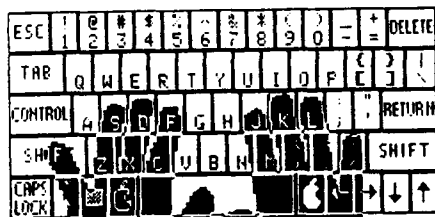Left Little Finger (Shift Key)
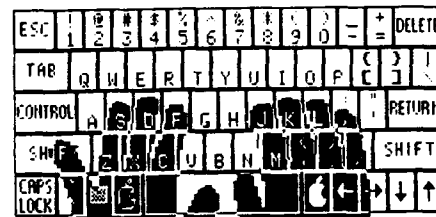

/   Right Little Finger

;   Right Little Finger
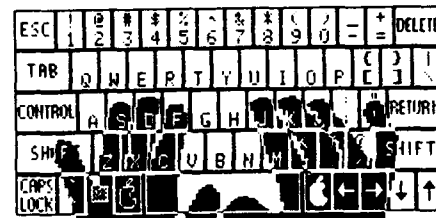
FINGERING POSITIONS (continued)

? Right Little Finger on /
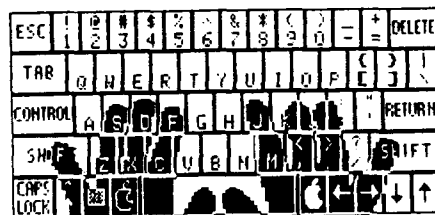Left Little Finger (Shift Key)

: Right little Finger on ;
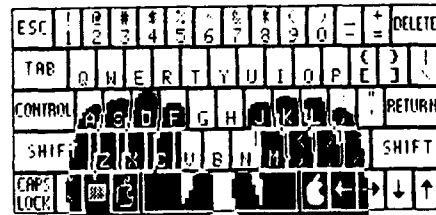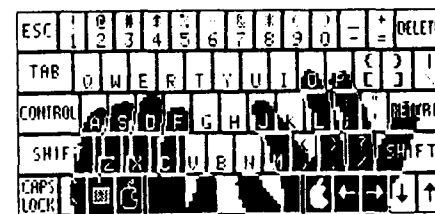Left Little Finger (Shift Key)

' Left Little Finger

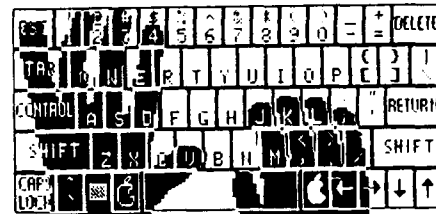**"** Left Little Finger on '
Right Little Finger (Shift Key)

Shift Either Little Finger

Space Bar Either Thumb

Return Right Little Finger

Escape Left Little Finger

SPEED AND ERROR CALCULATIONS

Speed (gwpm) Calculation

Throughout Keyboarding Primer, keying speed is given in gross words per minute—the number of key strokes (including arrow keys and correction strokes) divided by five strokes per word, divided by the number of minutes elapsed (seconds divided by sixty seconds per minute). The formula for this calculation is given below:

$$\text{GWPM} = \frac{\text{\# OF KEYSTROKES}}{\text{5 KEYSTROKES/WORD}} \div \frac{\text{\# OF SECONDS ELAPSED}}{\text{60 SECONDS/MINUTE}}$$

For example:

Using the content line:	When are you going to be home?
The student enters:	When are your g
The student sees an error, uses the Left-Arrow Key to back up (+3 strokes), removes the extra character (r), and completes the line:	When are you going to be home?

The student has keyed a total of 37 strokes (33 characters + 3 Left-Arrow Key strokes + [Return]). It took the student 36 seconds to complete the line.

Plugging the numbers into the formula yields:

$$\frac{\text{37 keystrokes}}{\text{5 strokes/word}} \div \frac{\text{36 seconds}}{\text{60 seconds/minute}} = 12 \text{ gwpm}$$

Error Calculation

A generous error margin is provided. One mistake is any error, or combination of errors, within a word. In this instance, a "word" is any combination of characters between two word spaces. The mistake can be any of the following:

a simple type	"goung" instead of "going"
an extra word	"are are you" instead of "are you"
a missing word	"When you" instead of "When are you"
a long word	"homeee" instead of "home"
a short word	"t" instead of "to"

SPEED AND ERROR CALCULATIONS (continued)

For example:

```
Good, SUSAN!
Practice keying the [E] key.
You may use the left arrow key [←]
to fix a mistake.
Press [RETURN] when done.

 ┌─────────────────────────────────────┐
 │ Key:                                │
 │ ed ed see sled lakes else safe      │
 │ ed edsee sled lakes elses safe█     │
 └─────────────────────────────────────┘
```
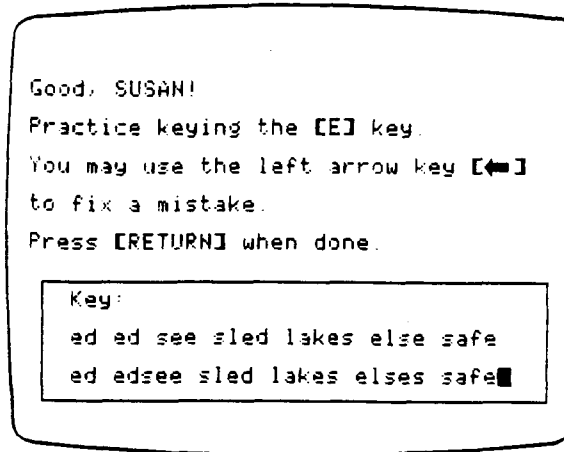
In the figure above, there are three mistakes.

1. **"edsee"** instead of **"ed"** - this is a long word,
2. the word **"see"** is counted as a missing word, and
3. **"elses"** instead of **"else"** - another long word.

Students are allowed three mistakes before they are required to retype a content line.

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